11: India G-4, 5 (1960-1961) 1962 AWll Kerala AWll

433 377 into a useful commodity. If this is done, it is possible to visualize that from 1965 onwards the State can be made the seat of bulk hydro-power generation not only for meeting the requirements of its own development programmes, but also for export to neighbouring areas in the southern zone. During the coming decade activities in connection with power development should, therefore, be geared mainly to the need of achieving this objective.

Prior to the Plans

433 377 655 7.5 The beginning of an extensive power supply system, utilizing hydro-power resources of the State, was first initiated with the establishment of the hydro-electric power station at Pallivasal in 1940. During the years of the Second World War the power system registered significant progress as a result of increased industrial activity in the State. Just prior to 1951, the State had developed a total installed capacity of about 33 MW, of which 14 per cent was in diesel stations and the rest in hydel projects. A 66 KV transmission system covered the State and power was distributed to about 28,000 consumers in 1958 towns and villages.

First Plan Period

7.6 Out of a total Plan provision of Rs. 30.03 crores, the largest share (Rs. 11.4 crores) was allotted to the development of power. Four hydro-electric projects viz., Sengulam Project, the Poringalkuthu Project I Stage, Poringalkuthu Project II Stage and the Nariamangalam Project, were taken up. During the First Plan period, the Mattupatty Dam (of the Pallivasal Project) with a storage capacity of 1,900 million cubic feet was constructed for augmenting the summer flow to the Pallivasal hydel station. The installed capacity of the station itself was raised to 37.5 MW providing for an effective generating capacity of the order of 32.5 MW. The Sangulam Project was commissioned in 1954 with an installed capacity of 48 MW. The Poringalkuthu Project, I Stage, was almost complete by 1956, and the remaining two projects were taken up for execution only during the last year of the First Plan. By 1956, the generating capacity had risen from 28.5 MW in 1951 to 85 MW, and the energy generated from 151 million units to 350 million units. Besides this, the transmission network was further expanded and 744 villages were electrified. An additional 51,456 consumers were connected to the system.

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Second Plan Period

7.7 The share of power was quite large in the Second Plan allocations. Out of the total outlay of Rs. 87 crores, the allotment for power development alone was Rs. 23.45 crores.

7.8 The total expenditure on power was made up of Rs. 11.40 crores for hydro

11: India G-4,5 (1960-1961) 1962 AWII Kerala AWII

*433 377 655 effective capacity was only around 84.5 MW. This will rise sharply with the execution of Panniar and Sholayar schemes during the early years of the Third Plan.

7.11 The position at the end of the Second Plan was as follows :—

Transmission, Distribution and Rural Electrification schemes had made good progress. The works which were completed include :

(i) the 110 KV Sengulam-Pallom-Kundra double circuit transmission lines and the 110 KV sub-stations at these places;

(ii) the 110 KV Neriamangalam-Alwaye-FACT double circuit transmission lines;

(iii) the 110 KV Sholayar-Poringalkuthu double circuit transmission lines;

(iv) the 66 KV single circuit line from Viyyur and Palghat; and

(v) the 66 KV sub-station at Peermade, Thiruvalla, Alleppey and Vythilla and 33 sub-stations at Karumagappally.

Besides a carrier communication system linking all the generating and receiving stations and the headquarters of the State Electricity Board was completed and taken into service. In the sphere of rural electrification, the benefit of electricity was further [365] extended to 1,003 centres, additional 97,662 consumers were connected to the system and 57,282 street lights were installed in various parts of the State.

GENERATION AND UTILIZATION OF ELECTRICITY

*433 377 7.12 Table 33[2] summarizes the progress of electric power generation and utilization in the State of Kerala during the period 1954-55 to 1958-59. Some of the characteristics are worth noting. Of the total available electrical energy, about 20 per cent is lost in transmission and distribution or used for power station auxiliaries (all India 17.5%). Of the rest, as could be expected, industries are the most important consumers. They account for about 65 per cent of total electricity consumption in the State, the comparable proportion in the country being 50-55 per cent. Next in order of importance is domestic lighting which absorbs about 6.5 to 8 per cent (all India about 10%). The proportion of power used for irrigation has varied between 2 and 4 per cent of the total. Pumping out of water from the water-logged areas of Kuttanad is one of the main source of utilization of electricity in the sphere of irrigation.

7.13 Apart from these, two other important points may be noted : (i) Practically all the energy generated (97-98%) is from the hydro-electric power stations. This is in marked contrast to the pattern of power generation in the rest of India where roughly 55 per cent of electricity is from thermal sources. However, unlike the rest of India where it is necessary to have thermal stations to stabilize supply of power throughout the year, in Kerala because of an exceptionally well distributed rainfall and consequently assured supply of water over the different seasons, there is no such necessity and (ii) It is significant that the load factor has been steadily increasing during the recent years. The units generated annually per kW of installed capacity reached a figure of 4,400 during 1958-59 from 3,200 in 1954-55, that is, the load factor increased from 37 per cent to 46 per cent. Additional demand for power since 1954 has been met, almost entirely, by more intensive utilization of the existing capacity.

[2] [Table 33, appearing on pp. 292 of the text, has not been processed — Analyst]